

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of operating a communications network comprising:

- a) measuring at each of a plurality of customer terminals usage by the respective customer terminal of network resources;
- b) calculating a network usage charge from ~~the~~ measurement data generated by said measuring at each of the plurality of customer terminals usage by the the respective customer terminal of network resources in step (a); and
- c) sampling usage of the network resources by at least one of the customer terminals by performing:
 - (i) measuring a portion of the usage ~~only of the network resources~~ by the at least one of the customer terminals; and
 - (ii) comparing data corresponding to the ~~this measurement of the network resources~~ in step (c) (i), with respect to the sampled usage, with data corresponding to one or both of the usage of network resources measured by the at least one customer terminal in step (a) and the network usage charge calculated in step (b).

2.-3. (canceled)

4. (previously presented) A method according to claim 1, further comprising a step of aggregating measurement data produced by a series of measurements at a respective customer terminal.

5. (previously presented) A method according to claim 1, further comprising storing the measurement data.

6. (previously presented) A method according to claim 5, including storing with the measurement data identifying a tariff applicable to the said measurement data.

7. (previously presented) A method according to claim 1 including communicating data generated by step (a) to a network accounting object controlled by a network operator.

8. (previously presented) A method according to claim 7, including communicating to the network accounting object a usage charge calculated from the measurement data.

9. (previously presented) A method according to claim 1, including communicating measurement data to a system remote from the customer terminal.

10. (previously presented) A method according to claim 7, wherein sampling the usage in step (c) is ~~carried out~~performed by a network operator and sampling the usage in step (c) comprises sampling ~~part~~-only part of the traffic communicated between a customer terminal and the network, comparing data corresponding to the sampled network usage with data communicated from the customer terminal to the network accounting object, and detecting any discrepancy.

11. (previously presented) A method according to claim 1 in which a network accounting object is configurable to receive data from a measurement object controlled by a network operator or from a customer terminal.

12. (original) A method according to claim 11, in which a customer accounting object associated with the customer terminal is configurable to direct data to the network accounting object.

13. (previously presented) A method according to claim 11, including switching the network accounting object from a first configuration in which data is received from the said measurement object and another configuration in which data is received from the customer terminal in response to a control signal received at the network accounting object.

14. (previously presented) A method according to claim 1 further comprising communicating a tariff to each of the customer terminals, and calculating at each of the terminals from the tariff and from accounting data the network usage charge.

15. (previously presented) A method according to claim 1 in which the communications network is a federated data network comprising a plurality of network domains.

16. (previously presented) A method according to claim 15 including communicating traffic between a customer terminal and a first network domain connected to the customer terminal;

further communicating the said traffic between the first network domain and a second network domain connected to the first network domain;

communicating network usage data from the customer terminal to a first network accounting object in the first domain; and

communicating accounting data between the first network accounting object and a second network accounting object in the second domain.

17. (previously presented) A method according to claim 16, including determining from a current routing table in the first network domain the identity of a second domain, wherein the second domain is communicating data with the customer terminal via the first network domain, and communicating network usage data for the customer terminal to the second domain identified by the current routing table.

18. (previously presented) A method according to claim 1 in which the step of measuring includes counting the quantity of data communicated in packets transmitted between the customer terminal and the communications network.

19. (previously presented) A method according to claim 18, including measuring packets received by the customer terminal and packets sent by the customer terminal.

20. (previously presented) A method according to claim 1, in which a payment for network usage is made to a third-party clearer.

21. (previously presented) A method according to claim 1, including automatically varying a tariff for network usage in dependence on loading of the network, and calculating a charge for network usage by applying the tariff to the measurement data.

22. (previously presented) A method according to claim 1, including transmitting packets on the network with a plurality of different classes of service.

23. (original) A method according to claim 22, including passing the said packets through a packet router, and in the packet router determining the classes of service applicable to the packets, and scheduling packets differently depending on the respective class of service.

24. (original) A method according to claim 23, in which a step of policing the classification of packets to determine the eligibility of a packet for a respective class of service is carried out at a location remote from the router.

25. (original) A method according to claim 24, in which the step of policing is carried out at a customer terminal.

26.-29. (canceled)

30. (previously presented) A method according to claim 10 including penalizing a customer when a discrepancy is detected.

31. (canceled)

32. (previously presented) A communications network arranged to operate by a method according to claim 1.

33. (previously presented) A customer terminal arranged to operate by a method according to claim 1.

34.-38. (canceled)

39. (previously presented) A method according to claim 25, in which

the policing by the customer is randomly audited concurrently with, or subsequently to, the respective data flow.

40. (previously presented) A method according to claim 18, wherein the packets are data packets.

41. (previously presented) A method according to claim 22, wherein the packets are data packets.

42. (previously presented) A method according to claim 18, wherein the packets are IP packets.

43. (previously presented) A method according to claim 22, wherein the packets are IP packets.

44. (previously presented) A method according to claim 18, wherein the packets are message packets.

45. (previously presented) A method according to claim 22, wherein the packets are message packets.

46. (currently amended) A method of operating a communications network having network resources and including a plurality of customer terminals operable to use

the network resources, the method comprising:

- a) each terminal measuring the amount of network resources which it uses;
- b) calculating a charge with respect to each terminal for its use of the network resources as determined by the respective terminal measuring the amount of network resources which it uses in step (a); and
- c) performing a sampling step to check the validity of the measurement of the amount of network resources performed by each terminal, wherein at some part of the network other than at the respective terminal, only a part of the total use of network resources made by the respective terminal is measured and compared with data corresponding to either the measurements of the amount of network resources taken by the respective terminal in step (a) or the charge calculated in step (b).

47. (withdrawn) A method of operating a communications network comprising a plurality of sub-networks each of which is operated by a different network operator, the method comprising:

- (a) establishing a data flow from an originating customer connected to a first one of the sub-networks operated by a first one of the network operators to a destination customer connected to a second one of the sub-networks operated by a second one of the network operators;
- (b) communicating tariff data from the first and second network operators to a clearing entity;
- (c) communicating tariff data for end-to-end flow from the clearing entity to at least one of the originating and destination customers;

- (d) measuring the quantity of data flowing from the originating customer into the network and the quantity of data flowing out of the network to the destination customer;
- (e) communicating measurement data generated by step d to the clearing entity;
- (f) at the clearing entity, calculating charge(s) from the measurement data and the tariff data;
- (g) making a payment from the clearing entity to one or both of the first and second network operators in accordance with the calculated charge(s); and
- (h) communicating a bill in accordance with the end-to-end tariff from the clearing entity to at least one of the originating customer and the destination customer.

48. (new) A method of operating a communications network comprising:

- measuring usage of network resources at each of a plurality of customer terminals;
- sampling usage of the network resources by a customer terminal by measuring a portion of the usage of network resources by that customer terminal;
- comparing data corresponding to the measured portion of the usage of network resources with data corresponding to the usage of network resources measured at the customer terminal or data corresponding to a usage charge calculated from the usage of network resources measured at the customer terminal;

wherein said sampling includes monitoring, by the network, a sample of actual network usage as a policing measure and checking that the sampled usage corresponds to the usage and/or cost reported by the corresponding customer terminal;

wherein said monitoring, by the network, does not include continuous monitoring of all of the usage by the corresponding customer terminal but does include intermittent sampling of the usage by the corresponding customer terminal, thereby checking the accuracy of the usage and/or cost reported by the corresponding customer terminal and reducing a burden on the network.